



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,362	03/08/2007	Peter Cawley	OSS-001	4018
35859	7590	04/01/2011		
Pierce Atwood LLP 100 Summer Street Suite 2250 Boston, MA 02110				
EXAMINER				
TOWA, RENE T				
ART UNIT		PAPER NUMBER		
3736				
NOTIFICATION DATE		DELIVERY MODE		
04/01/2011		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

BostonPatent@pierceatwood.com
ceverett@pierceatwood.com

Office Action Summary

Application No.

10/561,362

Applicant(s)

CAWLEY ET AL.

Examiner

RENE TOWA

Art Unit

3736

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16, 18-20 and 24-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16, 18-20 and 24-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-945)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3/7/11
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 7, 2011 has been entered.
2. This Office action is responsive to an amendment filed March 7, 2011. Claims 16, 18-20 & 24-31 are pending. Claims 1-15, 17, 21-23 & 32-34 have been cancelled. Claims 16 & 29 have been amended.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir.

1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claim 16 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 13 of copending Application No. 12/393,931.

The testing apparatus of the instant claim 16 is equivalent to the probe of claim 13 of application 12/393,931.

Claim 16 of the instant invention teaches each and every element of claim 13 except for a detectable part. However, since magnetic part of claim 16 is inherently magnetically detectable, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to provide the system of claim 16 with a detectable part as claimed in order to detect the magnetic part.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
6. **Claims 16, 18-20 & 25-31** are rejected under 35 U.S.C. 103(a) as being unpatentable over Meredith et al. (US 5,392,779) in view of Smiley et al. (US 4,511,330) and further in view of Maniglia et al. (US 6,161,046).

In regards to **claim 16**, Meredith et al. disclose a system for testing an implant 3 attached to a bone, the system comprising:

a member 1 adapted to be releasably attached to said implant 3, and,
detecting means (5, 6) for detecting at least one resonance frequency of the member 1 when it is attached to the implant 3,

wherein said member 1 comprises a detectable part (i.e. body of member 1) and said detecting means comprises a detector 6 for detection of said detectable part (i.e. body of member 1) (see fig. 1; col. 1, lines 38-45; col. 2, lines 19-24 & 51-58).

In regards to **claim 19**, Meredith et al. disclose a system further comprising an amplifier 8, a processor 9, and a data storing arrangement 9a (see col. 3, lines 1-8).

In regards to **claim 20**, Meredith et al. disclose a system wherein signals detected by the detector 6 are amplified by said amplifier 8 and applied as an input to be analyzed; the analyzed output, which represents a ratio of a response voltage to the excitation, is fed to said processor 9, which varies the frequency output of the oscillator of the analyzer 7, and stores the results in said data storing arrangement 9a (see col. 2, lines 59-68; col. 3, lines 1-8).

In regards to **claim 26**, Meredith et al. disclose a system wherein the member 1 comprises a cantilever beam (see col. 1, lines 53-63; col. 2, lines 51-55).

In regards to **claim 27**, Meredith et al. disclose a system wherein the beam is arranged or adapted to resonate at a frequency within the range of about 1 to 20 kHz (see col. 3, lines 63-68).

In regards to **claim 28**, Meredith et al. disclose a system wherein said member 1 is inherently disposable (i.e. the cantilever beam 1 can be thrown away whether intentionally or not, and is thus inherently disposable) (see fig. 1).

In regards to **claim 30**, Meredith et al. disclose a system wherein the beam is arranged or adapted to resonate at a frequency within the range of about 1 to 10 kHz (see col. 3, lines 63-68).

In regards to **claim 31**, Meredith et al. disclose a system wherein the beam is arranged or adapted to resonate at a frequency within the range of about 8 kHz (see fig. 2).

Meredith et al. disclose a system and equipment, as described above, that fails to explicitly teach a member comprising a magnetic part or a coil; or a detector comprising an electromagnetic part or a magnetic part.

However, **Smiley et al.** teach that it is known to provide an apparatus comprising a member (21, 23) comprising a magnetic part (see figs. 2 & 4) adapted to be releasably attached to a tooth; and, an electromagnetic field generator 15 for exciting the member (21, 23) (see figs. 1, 2A & 4A; col. 1, lines 33-44; col. 3, lines 21-28).

Moreover, **Maniglia et al.** teach that it is known to provide a disposable implant member 36' comprising a magnetic detectable part having a (titanium) coil releasably connected to a bone 24; and a probe portion comprising an electromagnetic detector 40' having a (driving) coil for contactless detection of said magnetic part (i.e. coil) (see fig. 4; col. 5, lines 45-49; col. 6, lines 8-10, 13-16 & 51-57).

In regards to **claims 16, 18-20 & 25-31**, Meredith et al. teach a system and equipment for exciting the member 1 attached to an implant 3 of a bone 4 (see fig. 1; col. 2, lines 30-34 & 59-68); since Meredith et al. teach that the excitation could alternatively comprise electromagnetic devices (see col. 2, lines 34-36), it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to provide the system and equipment of Meredith et al. with an electromagnetic field force generator and a member comprising a magnetic part as taught by Smiley et al. in order to electromagnetically excite the member.

Similarly, Meredith et al. teach a system and equipment for measuring the vibrations of a cantilever beam member 1 connected to a bone via an implant to assess the degree of attachment of the implant to the bone (see fig. 1); since Maniglia et al. teach that it is known to determine the vibrations of a member 36' connected to a bone 24 in a contactless manner via a magnetic detectable coil, and a magnetic detector coil (see fig. 4; col. 6, lines 51-57), it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to provide the system and equipment of Meredith et al. as modified by Smiley et al. with a magnetic detectable part comprising a coil and an electromagnetic detector comprising a coil as taught by Maniglia et al. in

order to remotely and electromagnetically monitor the vibration of the member so to assess the degree of attachment of the implant to the bone.

7. **Claim 24** is rejected under 35 U.S.C. 103(a) as being unpatentable over Meredith et al. ('779) in view of Smiley et al. ('330), Maniglia et al. ('046), and further in view of Mendes et al. (US 6,583,630).

Meredith et al. as modified by Smiley et al. and Maniglia et al. disclose a system, as described above, that fails to explicitly teach a detectable part consisting of a ferromagnetic material.

However, **Mendes et al.** teach that it is known to provide a member 150 attached to an implant (152, 154); wherein said member 150 includes a magnetic part and said detectable part consists of a ferromagnetic material (see fig. 12; col. 15, lines 8-26).

It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to provide the system of Meredith et al. as modified by Smiley et al. and Maniglia et al. with a detectable part consisting of a ferromagnetic material as taught by Mendes et al. in order to remotely measure vibrations of the ferromagnetic material so as to assess the degree of attachment of the implant to the bone.

Response to Arguments

8. Applicant's arguments filed March 7, 2011 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RENE TOWA whose telephone number is (571)272-8758. The examiner can normally be reached on Mon-Thurs, 8:00AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571) 272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Rene Towa/
Examiner, Art Unit 3736